

## ABSTRACT

This invention provides a method, apparatus and algorithm for compact description of objects in high-dimensional space of attributes for the purpose of cluster analysis by method of evolutionary transformation of similarity matrices. The proposed method comprises computation of monomeric similarity matrices based on each of parameters that describe a set of objects and the following hybridization of monomeric matrices into a hybrid similarity matrix, which allows for comparison of different attributes on a dimensionless basis. Individual monomeric matrices may be added to a hybrid matrix in any proportion, thus allowing for evaluation of significance of individual parameters. Two types of metrics are proposed for computation of monomeric matrices, depending on quantitative and qualitative nature of attributes used for description of objects under analysis.

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